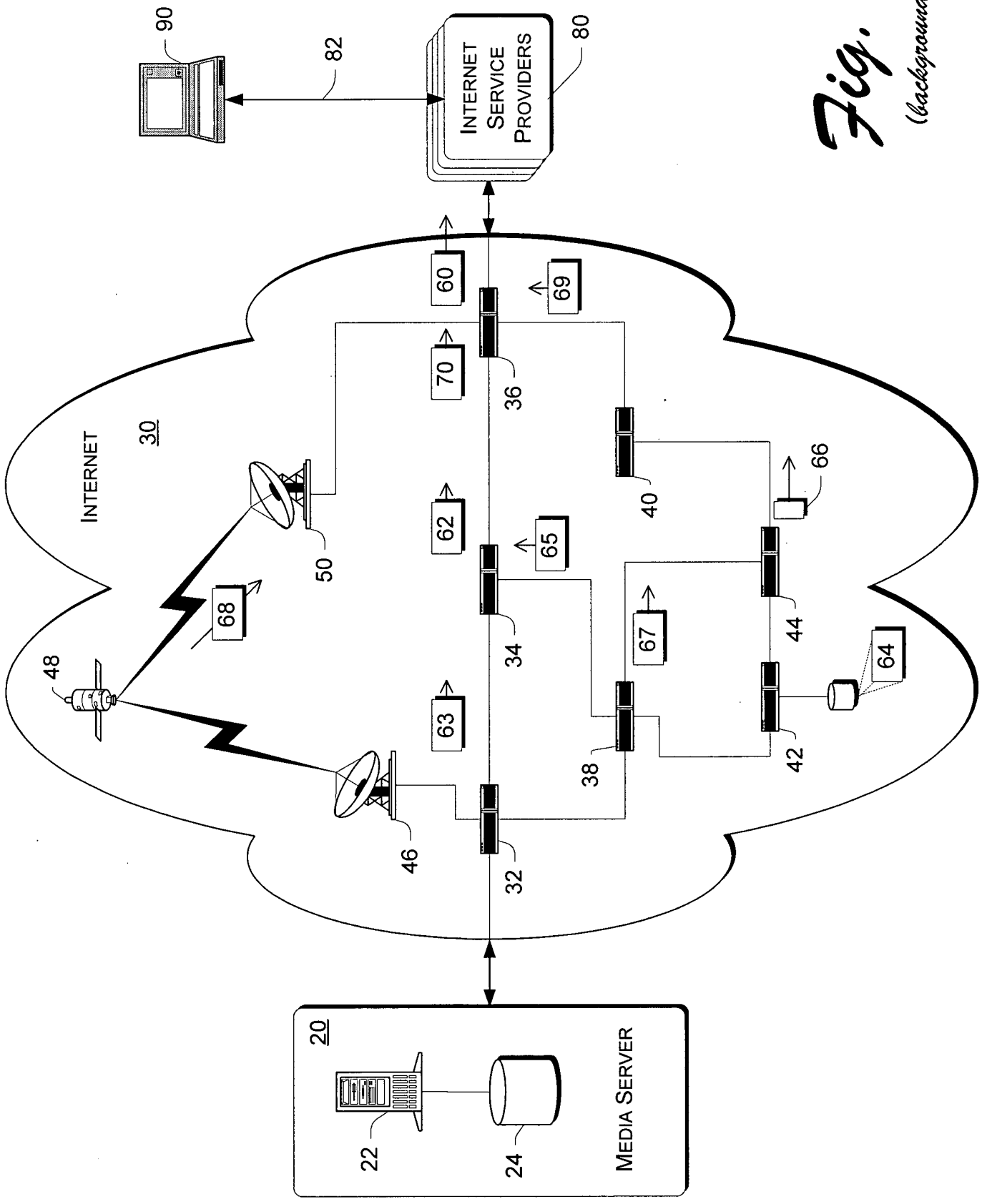


Fig. 1
(background)

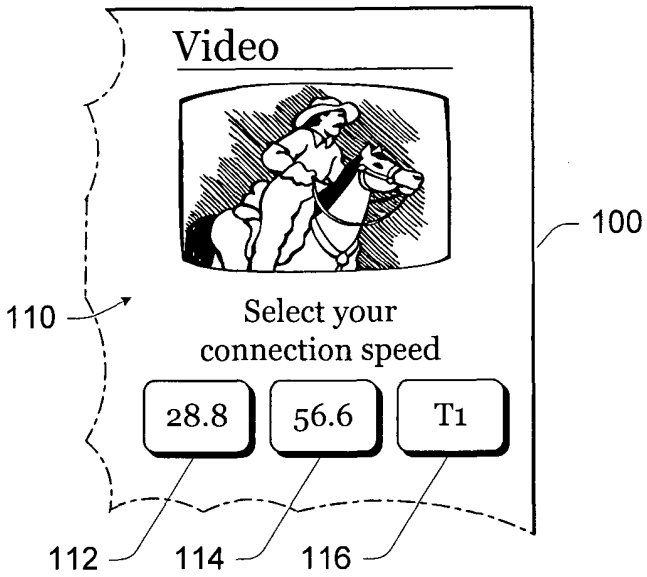


Fig. 2
(background)

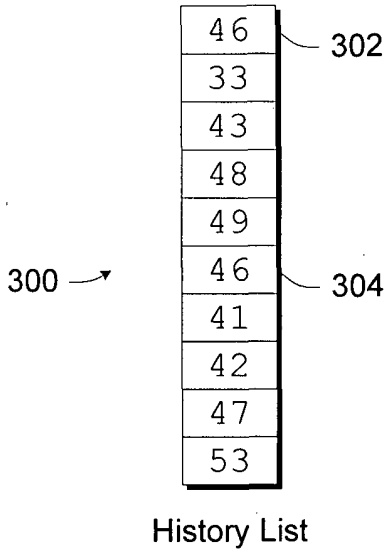


Fig. 4

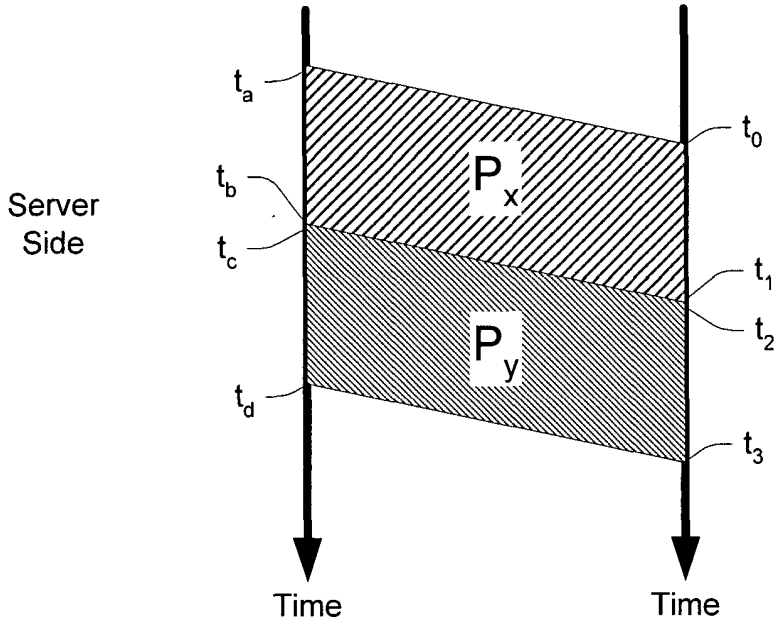


Fig. 3
(background)

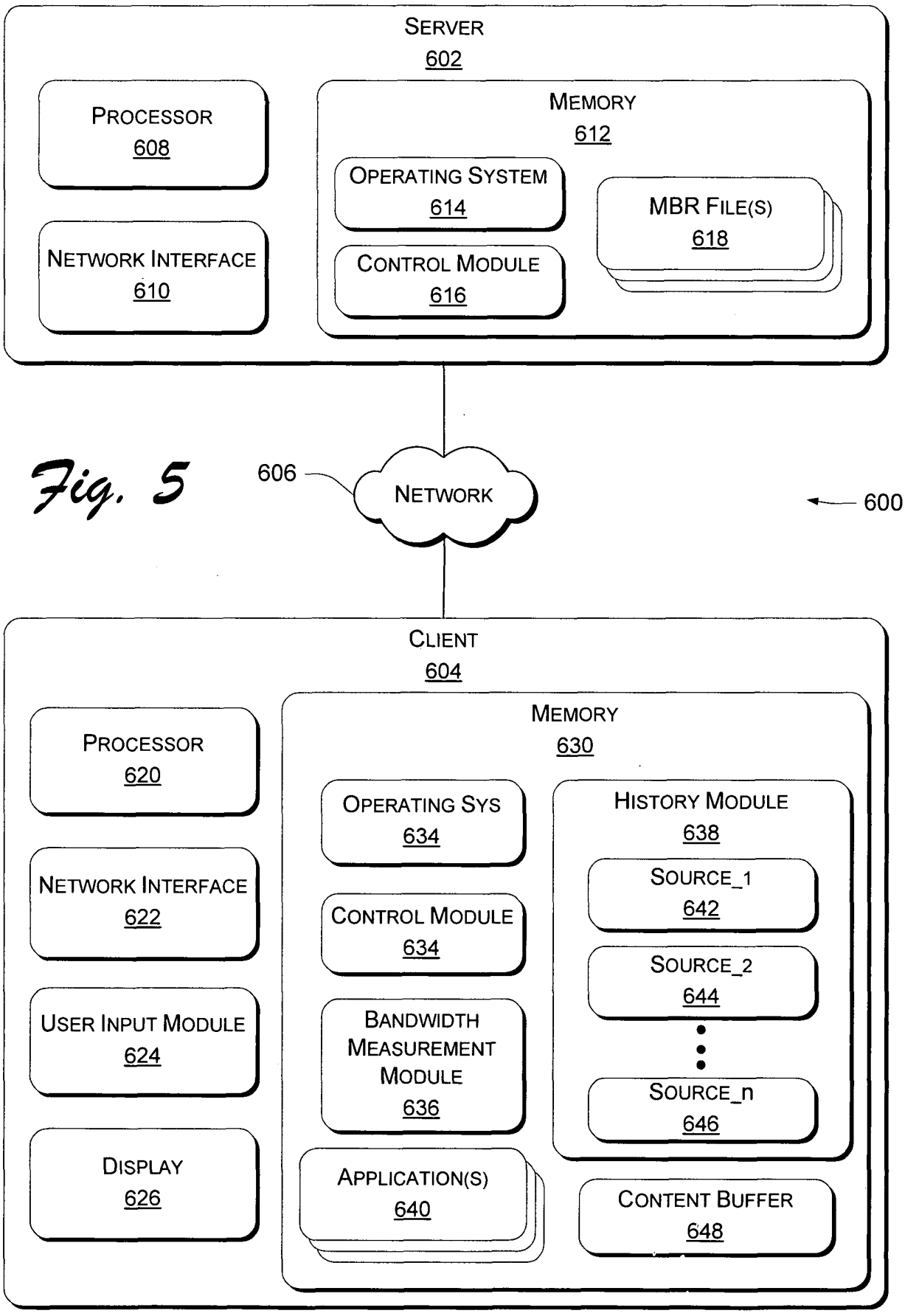

SERVER
602
PROCESSOR
608
NETWORK INTERFACE
610
MEMORY
612
OPERATING SYSTEM
614
CONTROL MODULE
616
MBR FILE(S)
618
606
NETWORK
600
CLIENT
604
PROCESSOR
620
NETWORK INTERFACE
622
USER INPUT MODULE
624
DISPLAY
626
MEMORY
630
OPERATING SYS
634
CONTROL MODULE
634
BANDWIDTH MEASUREMENT MODULE
636
APPLICATION(S)
640
HISTORY MODULE
638
SOURCE_1
642
SOURCE_2
644
SOURCE_n
646
CONTENT BUFFER
648

Fig. 5

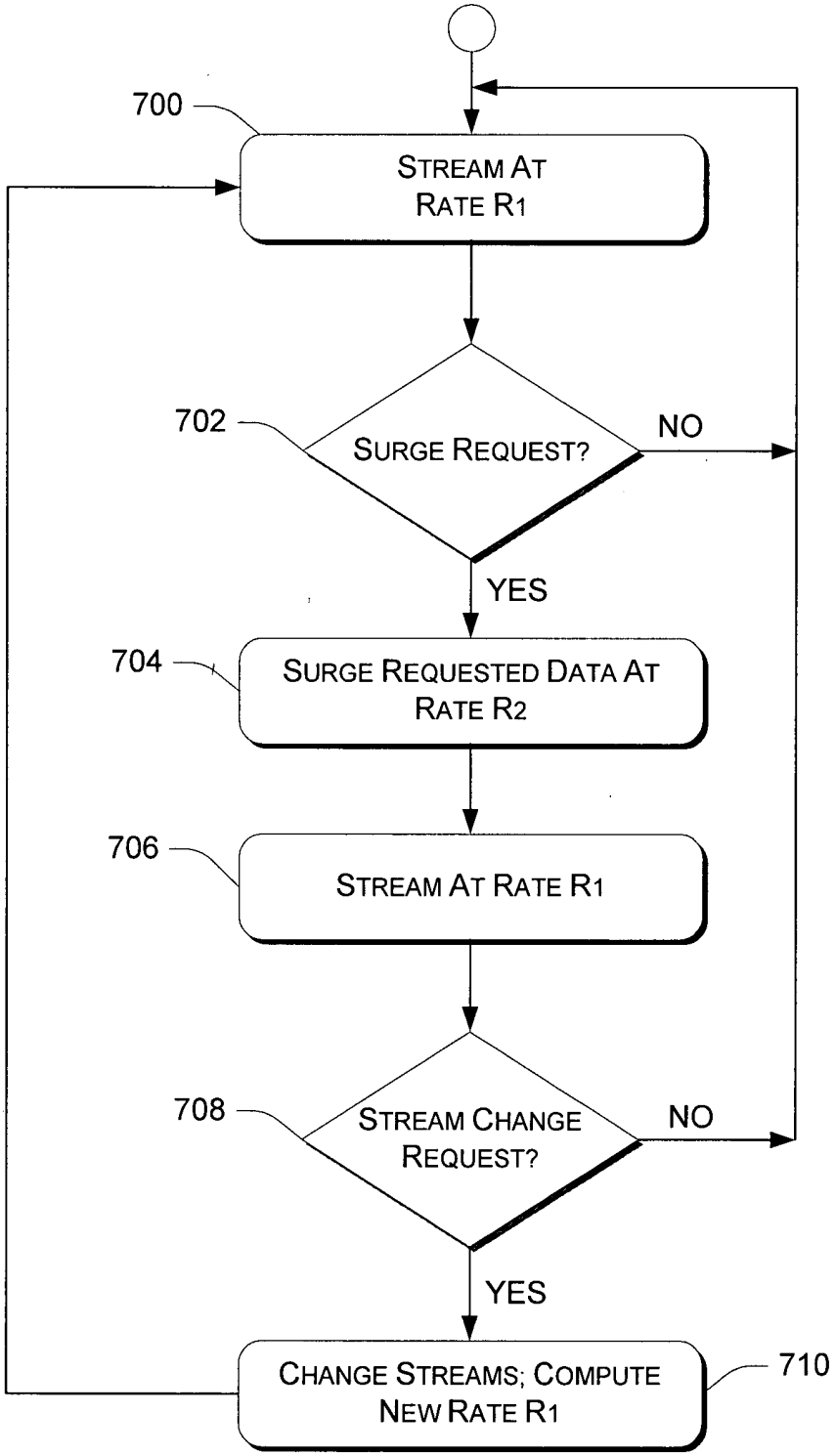

700
STREAM AT RATE R1
702
SURGE REQUEST?
NO
YES
704
SURGE REQUESTED DATA AT RATE R2
706
STREAM AT RATE R1
708
STREAM CHANGE REQUEST?
NO
YES
CHANGE STREAMS; COMPUTE NEW RATE R1
710

Fig. 6

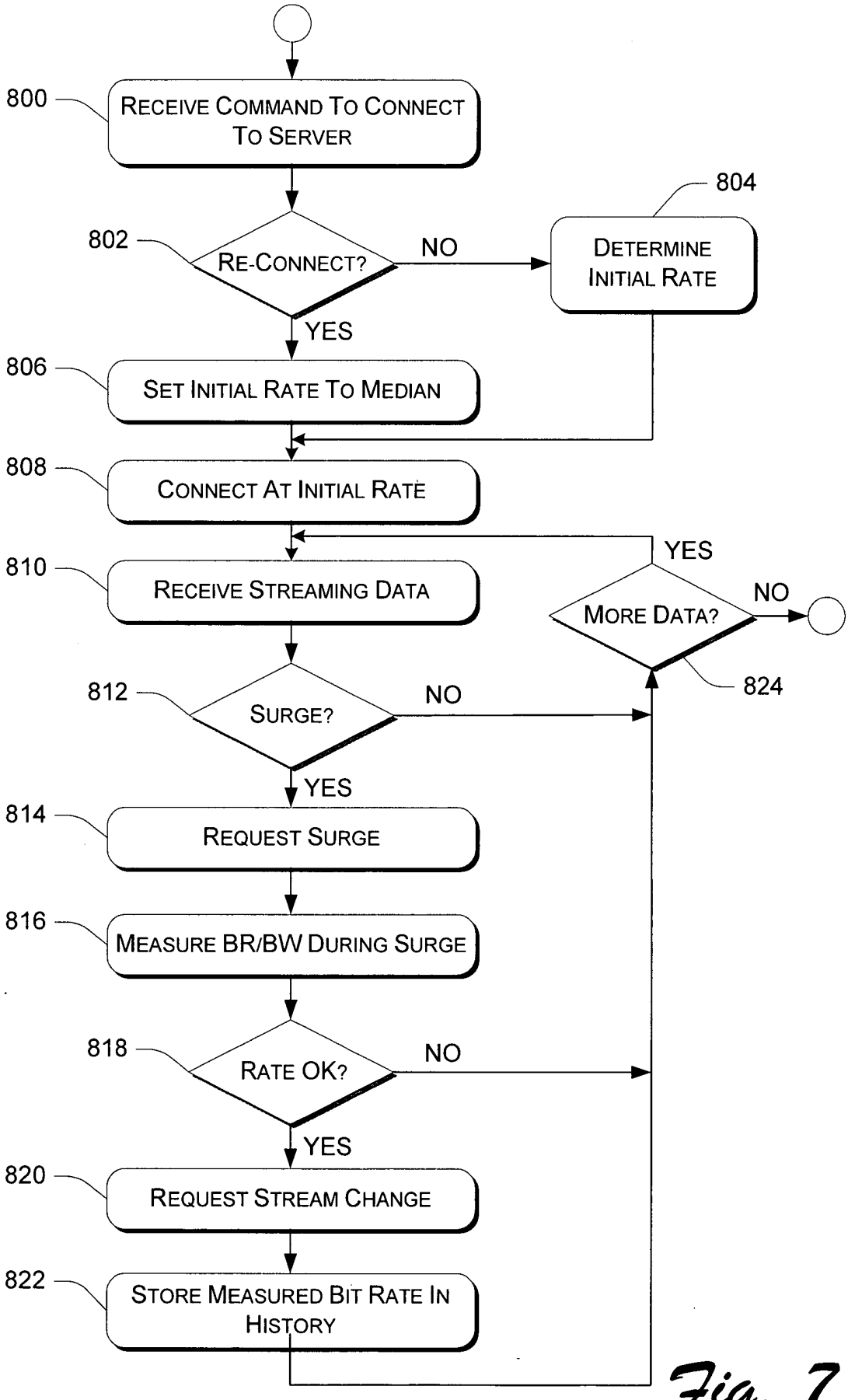
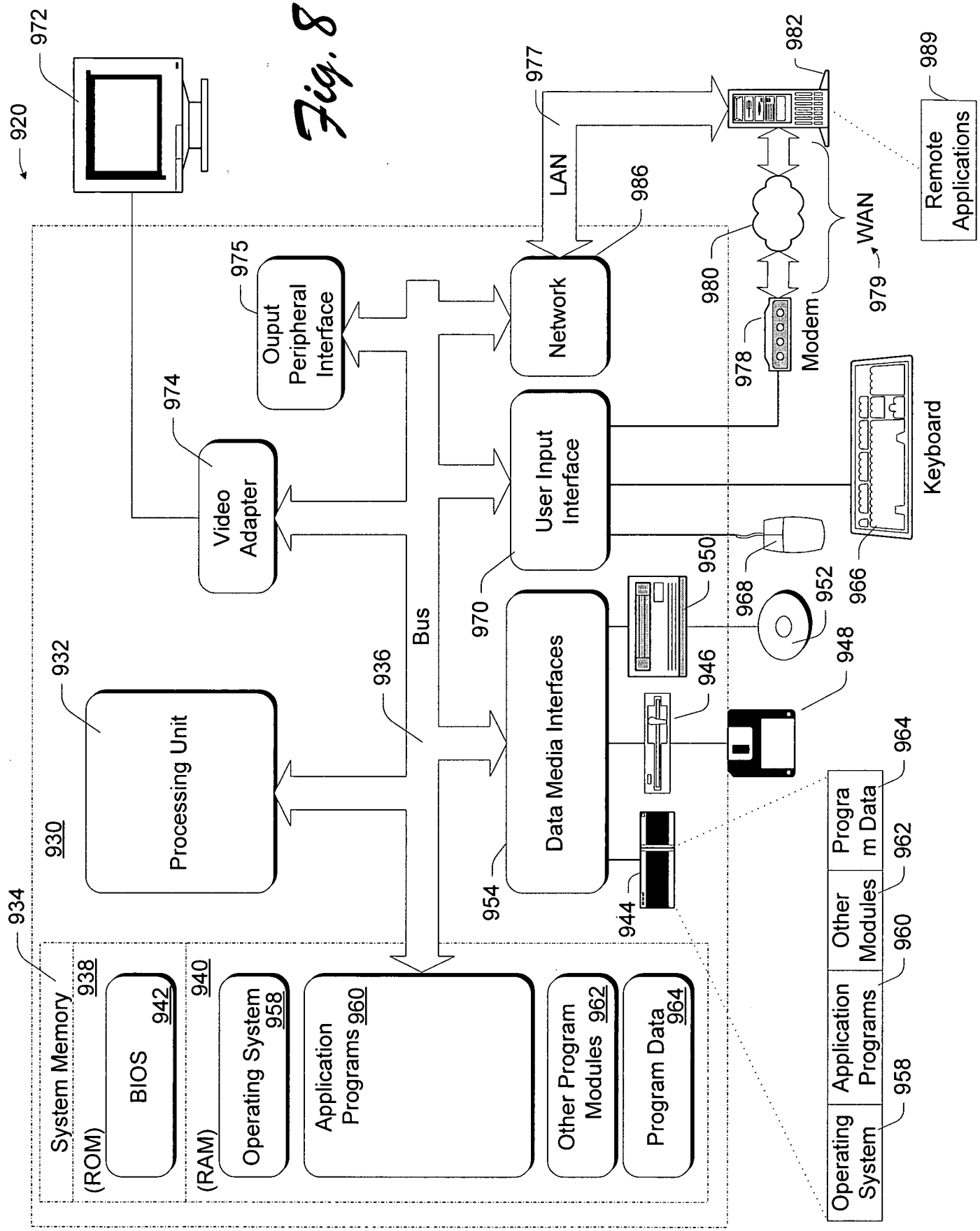

800
RECEIVE COMMAND TO CONNECT TO SERVER
802
RE-CONNECT?
NO
804
DETERMINE INITIAL RATE
YES
806
SET INITIAL RATE TO MEDIAN
808
CONNECT AT INITIAL RATE
810
RECEIVE STREAMING DATA
812
SURGE?
NO
YES
814
REQUEST SURGE
816
MEASURE BR/BW DURING SURGE
818
RATE OK?
NO
YES
820
REQUEST STREAM CHANGE
822
STORE MEASURED BIT RATE IN HISTORY
MORE DATA?
YES
NO
824

Fig. 7

Fig. 8


920
972
977
982
989
Remote Applications
LAN
WAN
986
980
979
975
Ouput Peripheral Interface
Network
Modem
978
974
Video Adapter
User Input Interface
Keyboard
950
952
966
968
970
Bus
932
936
Processing Unit
930
Data Media Interfaces
946
948
954
944
934
System Memory
938
(ROM)
BIOS
942
940
(RAM)
Operating System
958
Application Programs
960
Other Program Modules
962
Program Data
964
Operating System
Application Programs
Other Modules
Program Data